PATENT SPECIFICATION

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(54) IMPROVEMENTS IN TRAVEL CASES

(71) We, ANTLER LIMITED, a British Company of Pilot Works, Alfred Street, Bury, Lancashire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to travel cases.

Cases of the rigid type made of stiff material such as fibre board, plywood and the like have hitherto presented manufacturing difficulties in so far as the forming of angles, or providing for other changes in direction of the contours, of the cases are concerned, because the stiff materials cannot be bent, or at least can only be bent to a limited extent.

The present invention is particularly aimed at facilitating the manufacture of such rigid cases, although it is also applicable to the soft type of case made of pliant material.

The present invention consists in a travel case having sheet, wall-forming components joined at edges thereof by a flexible extruded plastics strip of substantially angle section comprising limbs of channel form which receive the edges of the sheet components and are secured to the components, and a hollow portion in the angle between the limbs.

The case now provided may be constructed relatively easily regardless of whether the sheet components are made of stiff or soft material. Where they are stiff material the strip can be used to form all the angles which cannot readily be formed in the stiff components themselves, and so the components can be kept to simple forms which are not difficult to produce. This enables manufacturing costs to be reduced. If the sheet components are made of soft material they also may be of simple forms.

The invention further consists in a travel case having a body and lid each comprising sheet components which form a panel and a band thereof, the band being a single component which extends around the edge of the panel and is joined to the panel by a flexible extruded plastics strip of substantially angle section comprising limbs of channel form and a hollow portion in the angle between the limbs, the limbs respectively receiving and being secured to the edge of the panel and to a longitudinal edge of the band.

The limbs of the strip may be sewn to the sheet components. To facilitate the sewing process the thickness of the material of the limbs may be reduced at the parts of the limbs through which the stitches are required to pass. For example, shallow grooves may be formed in the surfaces of the limbs for this purpose.

Alternatively the limbs may be adhesively secured to the components, or perhaps rivetted.

The hollow portion of the strip saves material and may increase the flexibility of the strip itself, but the primary reason for the hollow portion is to enable stiffening material to be inserted into the strip, if desired, to help the strip to retain a required form in the longitudinal direction of the strip. This is especially useful when the sheet components are made of soft material because then the stiffened strip provides added support at the edges of the case. Cord such as that used to stiffen piping, for example, may be inserted in the strip, or plastics filaments, or metal wire or rod.

If the case is to be rigid any of the known stiff materials used in the conventional rigid type of case may be used to form the sheet components. It is possible that other materials may be used as well, such as lightweight sheet metal or plastics sheet materials. For a soft case the sheet components may be made of vinyl, fabric or any oth r suitable material.

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a travel

case embodying the invention,

Figure 2 is an enlarged fragmentary perspective view of a flexible strip used in the construction of the case, and

Figure 3 is an enlarged fragmentary perspective view showing the strip joining two sheet components of the case.

The travel case is of rigid construction. It has a body 1 and lid 2 which are hingedly connected together in known manner, and each of which comprises a flat, basically rectangular panel 3 with well-rounded corners, and a band 4 extending around the four sides of the panel 3. The panels 3 and bands 4 are all made of stiff fibre board. Each panel 3 is formed by a single sheet of the fibre board, and each band 4 is also formed by a single length of the fibre board the ends of which are joined together and which is bent into a rectangular loop corresponding in shape to the outline of the panel around which it extends. By providing the panel with well-rounded corners, having for example a radius of 2''—2½'', the fibre board of which the band is made is able to be bent without difficulty, and without creasing, to enable it to pass around the four corners of the panel. The joined ends of the band are disposed at the back of the case, that is at the side opposite to that on which catches 5 and a handle 6 are provided.

The bands 4 are connected to their associated panels 3 by means of flexible extruded plastics strip 7. Preferably the strip 7 is made of polyvinyl chloride. A single length of strip 7 is used to connect each band 4 to the panel 3.

As shown in Figures 2 and 3, the strip used is of substantially angle section with limbs 8 and 9 of channel form, the one limb 8 being somewhat shorter than the other limb 9. One flange 10 of the shorter limb 8 forms at an inner portion 11 thereof the base of the channel of the longer limb 9. That flange 10 is joined at its outer end by an integral, generally thinner, J-shaped portion 12 to one flange 13 of the longer limb 9. The J-shaped portion 12 lies in the angle of the strip and a recess 21 defined by this portion and the flange 10 opens into the inner end of the channel of the limb 9. The inner portion 11 of the flange 10 is thinner than the remainder of the flange. A second flange 14 of the shorter limb 8 and a second flange 15 of the longer limb 9 each have a shallow groove 16 and 17 respectively in the external surface extending lengthwise of the strip, which reduces the thickness of the outer portion of the flange. The second flange 15 of the longer limb 9 is inset from the base of the shorter limb 8 so that the external surface of the un-grooved part of that flange is almost level with the inside surface of the base of the channel in the shorter limb 8.

The shorter limb 8 of the strip receives into its channel the edge of the panel 3 and the longer limb 9 receives the edge of the band 4 into its channel. In the manufacturing process, first the shorter limb is secured to the panel by stitching 18 which passes through its flanges 10 and 14, the stitching being in the groove of the latter flange, and then the longer limb is secured to the band by stitching 19 which passes through the flanges of that limb and is in the groove 17 of the second flange 15. The thinning of the inner portion 11 of the flange 10 and the fact that the flange 13 of the longer limb is joined at its inner end to the thinner J-shaped portion 12, allows the two flanges to be drawn towards their associated flanges by the stitching, so that the panel and band are closely embraced by the flanges.

Because it has a relatively short limb which engages with the panel 3 the strip 7 can extend round the corners of the panel with minimum tendency for the flanges of that limb to be distorted by the curvature.

Stiffening material, such as piping cord, may be inserted in the recess 21 of the strip, as indicated at 20 by broken lines in Figure 3. Before the strip is applied to the fibre board components, or at least to the band 4, the flange 13 of the longer limb 9 may be turned back to enable the cord 20 to be inserted into the recess 21. Metal rod members of made-up rigid reinforcing frames may be readily inserted into the recess in this way, if desired. When the turned-back flange is released after the insertion the J-shaped portion 12 closes over the stiffening member which is subsequently trapped in position when the longer limb is secured to the band.

In this illustrated embodiment the surface of the strip which is disposed externally of the case is plain. It may, however, be fluted, ribbed or otherwise shaped or treated for decorative effect.

It will be apparent from the foregoing how a case in accordance with the invention of soft construction may be made.

WHAT WE CLAIM IS:—

1. A travel case having sheet, wall-forming components joined at edges thereof by a flexible extruded plastics strip of substantially angle section comprising limbs of channel form which receive the edges of the sheet components and are secured to the components, and a hollow portion in the angle between the limbs.

2. A travel case having a body and lid each comprising sheet components which form a panel and a band thereof, the band being a single component which extends around the edge of the panel and is joined to the panel by a flexible extruded plastics strip of substantially angle section comprising limbs of channel form and a hollow portion

in the angle between the limbs, the limbs respectively receiving and being secured to the edge of the panel and to a longitudinal edge of the band.

3. A travel case according to claim 1 or claim 2 wherein a portion of one, first, limb of the strip also forms the base of the channel of the second limb.

4. A travel case according to any preceding claim wherein there is an opening into the interior of the hollow portion in the channel of one of the limbs.

5. A travel case according to claim 4 as dependent from claim 3 wherein the opening into the interior of the hollow portion is in the channel of said second limb.

6. A travel case according to claim 5 wherein the portion of the first limb which forms the base of the channel of the second limb is part of a flange of the first limb defining one side of the channel of that limb, and the hollow portion comprises a flexible part of the strip which joins said flange of the first limb to a flange of the second limb defining one side of the channel of the second limb and allows the last-mentioned flange to be deflected away from an opposing flange defining the other side of the channel in the second limb.

7. A travel case according to claim 6 wherein the flexible part is joined to the outer end of the flange of the first limb and to an inner end of the flange of the second limb.

8. A travel case according to any preceding claim wherein stiffening material is inserted in the hollow portion.

9. A travel case according to claim 8 wherein the stiffening material comprises metal rod members of a rigid reinforcing frame.

10. A travel case according to any preceding claim wherein one limb of the strip is shorter than the other.

11. A travel case according to claim 10 as dependent from any of claims 3, 5, 6 and 7 wherein the first limb is the shorter limb.

12. A travel case according to any preceding claim wherein the limbs of the strip are sewn to the sheet components.

13. A travel case according to claim 12 as dependent from claim 6 wherein the stitching securing the first limb to the sheet component it receives passes through said flange of that limb adjacent to the hollow portion and into the interior of the hollow portion.

14. A travel case according to claim 12 or claim 13 wherein the thickness of the material of the strip is reduced at parts of the limbs through which the stitching passes.

15. A travel case according to claim 3 wherein the portion of the first limb which forms the base of the channel of the second limb is part of a flange of the first limb defining one side of the channel of that limb, and the thickness of said flange is reduced adjacent to the base of the channel of the first limb.

16. A travel case according to any preceding claim wherein the sheet components are made of stiff material.

17. A travel case according to any of claims 1 to 15 wherein the sheet components are made of soft material.

18. A travel case according to any preceding claim wherein the strip is made of polyvinyl chloride.

19. A travel case substantially as described herein with reference to and as illustrated by the accompanying drawings.

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1451893 COMPLETE SPECIFICATION

1 SHEET *This drawing is a reproduction of the Original on a reduced scale*

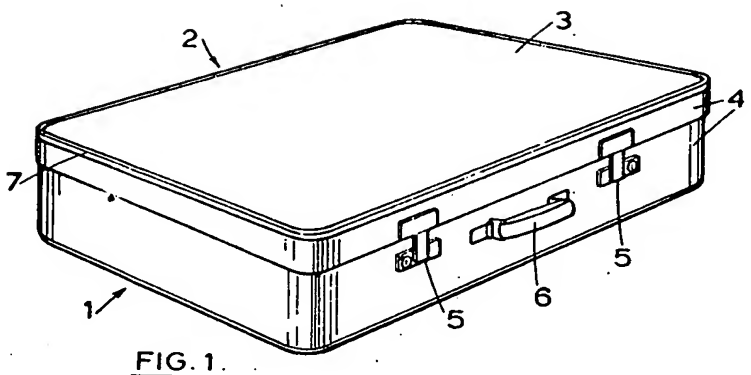

FIG. 1.

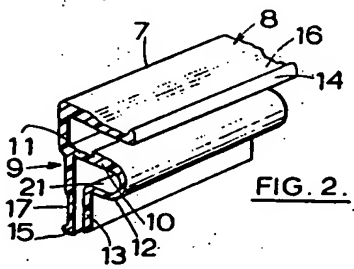

FIG. 2.

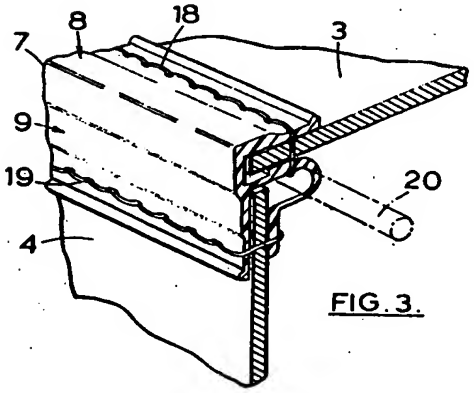

FIG. 3.